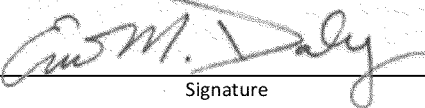




NORM/TENORM WASTE ADDENDUM

PROFILE# _____

A. GENERATOR INFORMATION		B. DISPOSAL SITE	
1. Generator:	U.S. Environmental Protection Agency	<input checked="" type="checkbox"/> Wayne Disposal Landfill	
2. EPA ID No.:	N/A	<input type="checkbox"/> Michigan Disposal Treatment Plant	
3. Common Name of Material:	Remediated soils with slag		
4. Material Description:	Soils and slag generated from remediation of legacy site contaminated with TENORM.		
C. Generally Exempt Unimportant Quantities of Source Material Uniformly Dispersed in Soil or other Media			
1. Complete this Section if waste is being profiled as <u>generally exempt</u> (< 0.05% by weight). Does the material contain? (check all that apply)			
<input type="checkbox"/> Natural, Refined, or Depleted Uranium <input type="checkbox"/> Thorium (Th-232) <input checked="" type="checkbox"/> Both Uranium and Thorium			
2. Source Material Sum of Fractions (SOF) Formulas:			
Natural Uranium + Thorium		Refined Uranium + Thorium	
$\frac{\text{Conc}_{\text{U-238}}}{167 \text{ pCi/g}} + \frac{\text{Conc}_{\text{Th-232}}}{55 \text{ pCi/g}} \leq 1$		$\frac{\text{Conc}_{\text{U-Total}}}{333 \text{ pCi/g}} + \frac{\text{Conc}_{\text{Th-Total}}}{110 \text{ pCi/g}} \leq 1$	
Depleted Uranium + Thorium			
$\frac{\text{Conc}_{\text{U-238}}}{169 \text{ pCi/g}} + \frac{\text{Conc}_{\text{Th-232}}}{55 \text{ pCi/g}} \leq 1$			
Notes:			
1. Unless otherwise noted, use parent nuclide in equations		5. Refined Uranium refers to chemical forms where the equilibrium state of the uranium decay chain has been disrupted.	
2. Th-232 will routinely be considered to be in equilibrium with all progeny.		6. Depleted Uranium contains U-235 at < 0.71% by weight	
3. Total Uranium = U-234 + U-235 + U-238.			
4. Total Thorium = Th-232 + Th-228			
3. Use this space to perform source material SOF calculations: (if waste only contains U or Th, enter zero for other nuclide)			
(50 pCi/g)/(167 pCi/g) + (38.4 pCi/g)/(55 pCi/g) = 0.299 + 0.698 = 0.997 < 1.			
Above SOF calculation was computed using Th-232 as the limiting radionuclide. Concentrations for Th-232 ranged from 50-70% greater than U-238. Ratios between Th-232 and U-238 may vary slightly but the sum of fractions will be less than one.			
D. NORM/TENORM other than Source Material Dispersed in Soil or Other Media			
1. Does the waste contain:	<input checked="" type="checkbox"/> Ra-226	<input type="checkbox"/> Pb-210	<input type="checkbox"/> K-40
2. Waste Concentration (pCi/g):	46	N/A	N/A
3. WDI Site Disposal Limits: (Note 1)	50	260	(Note 2)
Notes:			
1. MDI may receive higher concentrations for treatment or blending. All treated waste intended for disposal at WDI must meet the limits shown in D.3.			
2. K-40 may not be enriched beyond its natural concentration.			
3. Contact WDI Waste Approvals.			
E. NRC or Agreement State Exempted Products, Devices, or Items			
1. Type of exempt item(s) or product(s)	N/A	No. of Items:	<input type="checkbox"/> Check if additional inventory information is attached.
2. The items are exempt under:	(cite regulatory reference, i.e. 10CFR30.14)		
Notes:			
1. Material must be transported in accordance with DOT Rules and Regulations.			
2. The generator must provide an estimated inventory of activity, by isotope, for each container.			
3. Individual packages may bear White I or Yellow II Labels as long as the maximum surface dose rate on any package does not exceed 10 mrem/hr.			
F. CERTIFICATION STATEMENT:			
I certify that the contents of the package(s) being shipped to WDI/MDI are not licensed or regulated at the point of generation by the US Nuclear Regulatory Commission or an Agreement State, in accordance with <u>10CFR40.13(a)</u> (cite regulation or other document that confirms materials are not licensed by the NRC or an agreement state).			
Eric M. Daly/ On-Scene Coordinator for USEPA			
Name / Title (please print)			
		11/04/2016	
Signature		Date	